Message

From: Lang, Johnsie [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=B220365E540947F7A7C55CDE0904F73E-LANG, JOHNS]
Sent: 10/12/2018 10:21:13 AM
To: Strynar, Mark [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5a9910d5b38e471497bd875fd329a20a-Strynar, Mark]
Subject: RE: synthesis help

Hi Mark,

Do I need to order the starting compound?

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From: Strynar, Mark
Sent: Tuesday, October 02, 2018 8:07 AM
To: Surratt, Jason D. <surratt@unc.edu>
Cc: McCord, James <mccord.james@epa.gov>; Lang, Johnsie <lang.johnsie@epa.gov>
Subject: synthesis help

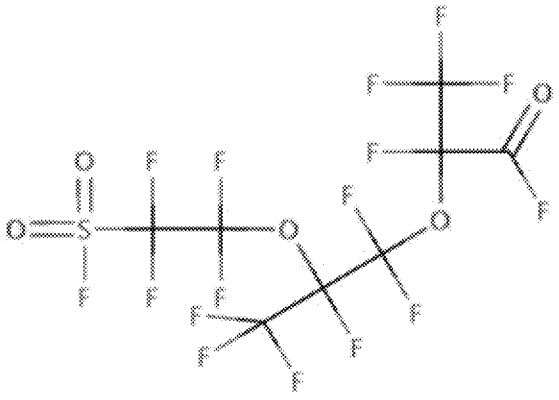
Hi Jason,

I hope you have got some time to rest since the meeting on Friday. I thought it was well done and covered a lot of important ground.

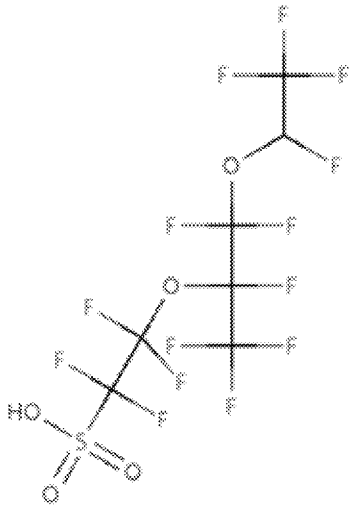
I am emailing to start the discussion of our need to get some standards synthesized and follow-up on isolation of chemicals from industrial products. Setting up a visit to you labs for a crew of us would be great too.

My most pressing need is the synthesis of a chemical we find in the water in Wilmington and in the serum of humans exposed. We call it Nafion BP2. It is the second chemical below. We have received a small amount of this chemical from Chemours (~80 mg) about 1 year ago. We are now conducting experiments on dosed rodents that require a lot of chemical so our stock is all but used up.

I know we can get this chemical from a commercial vendor. It is $395 for 5 grams.
http://synquestlabs.com/product/id/52754.html



We need Nafion BP2 (here below)



As you can see this requires the removal of the acyl fluoride and replacement with a H. In addition the sulfonyl fluoride needs to be turned into a sulfonate. I believe if this was simply put in water the acyl fluoride and sulfonyl fluoride go to the corresponding carboxylic acid and sulfonate. I also know for other PFAS the decarboxylation can occur via thermal or chemical attack.

I welcome your response. We have hands in the lab to help out or conduct this synthesis. What we lack is knowledge of how and the equipment to perform this experiment. Please do get back to us when you have a chance.

Thanks,
Mark

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